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AUTHOR Behr, George
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ABSTRACT

The performance patterns of about 13,000 Asian/Pacific Islander (API) students in mathematics, written composition, and reading in grades 1 through 6 were examined. Student information was obtained through the Los Angeles Unified School District's data base for the Survey of Essential Skills (May 1982). Predominantly English-speaking, the students represented many subgroups (Chinese, Japanese, Korean, Vietnamese, Samoan, etc.). The exploratory analysis identified manipulable variables of classroom instruction that affect the schooling achievement of API students, such as the amount of time spent using grade-level instructional materials, the "thickness" or "thinness" of lesson space devoted to particular skill areas, the placement of instruction in the curriculum sequence, and the relative complexity of the skill area concepts. Implications for improved instruction for all students are discussed. Numerous line graphs illustrate skill area patterns. (Author/BW)

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# SOUTHWEST REGIONAL LABORATORY TECHNICAL NOTE

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## INSTRUCTIONAL ACCOMPLISHMENT PATTERNS OF ASIAN/PACIFIC ISLANDER ELEMENTARY STUDENTS

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The performance patterns of about 13,000 Asian/Pacific Islander (API) students in mathematics, written composition, and reading in grades 1 through 6 are examined. The exploratory analysis identifies manipulable variables of classroom instruction that affect the schooling achievement of API students.


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# INSTRUCTIONAL ACCOMPLISHMENT PATTERNS OF ASIAN/PACIFIC ISLANDER ELEMENTARY STUDENTS

George Behr

National, state, and local data typically indicate that Asian/Pacific Islander (API) students "do well in school." Apart from those students with limited English proficiency, API students are not considered to be an "educational problem." API students as a group are thought to be highly motivated, well-disciplined, and good students. Occasional concern is expressed that API students tend to specialize in math and science and to avoid other academic areas. But by and large, after noting that the scores of API students are "relatively high," analysis ends and attention moves elsewhere. The present analysis examines the instructional accomplishments of API elementary students a little more closely.

## Background

The opportunity to conduct the analysis was provided by the availability to us of the Los Angeles Unified School District's data base for the Survey of Essential Skills (SES). SES is one component of the District's elementary school grade-by-grade advancement policy. SES is an assessment and reporting system oriented around the skills the District deems essential for grade-by-grade progress in the elementary grades (1 through 6). The SES includes mathematics, written composition, and reading. Almost all students are assessed each Spring of each school year. The only exceptions are for students classified as non-English speaking.

The SES is not used a a pass/fail system to make promotion/retention decisions for individual students. (The SES information is one of five components for making such decisions.) Rather, the SES results are used to document student learning accomplishments for the school year and to assist in planning the instructional program for the student for the successive year and grade-level. The information is also used at the school and district level to review the school's and district's instructional accomplishments with an eye toward efficiently and effectively allocating resources for improving instruction.

For a variety of reasons, selected demographic and instructional information is concurrently collected along with each student's SES performance information. For example, a student's ethnic classification is one of the concurrently collected pieces of information. Because Los Angeles is so large and so ethnically diverse, such classificatory information allows the identification of large subpopulations for accomplishment reviews.

Our analysis used the May 1982 SES information base for those students identified by the child's teacher as Asian/Pacific Islander. This category includes many diverse subgroups: Chinese, Japanese, Korean, Vietnamese, Samoan, etc. Approximately 13,000 API classified students were administered the SES in May of 1982. Table 1 shows the number of API classified students by grade (1 through 6) and by subject area (mathematics, written composition, reading). Note that students classified as non-English speaking are not included in the student Ns of Table 1 except for Grade 5 where <u>all</u> students are required to be assessed regardless of their English ability.

Table 1

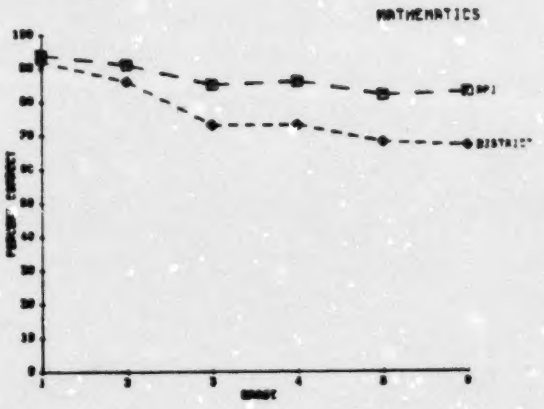
Number of API Students by Grade and Subject

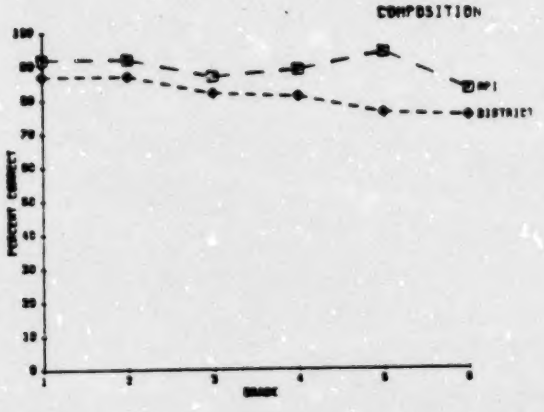
| Grade | Mathematics | Composition | Reading |
|---|---|---|---|
| 1 | 1894 | 1655 | 1690 |
| 2 | 1948 | 1883 | 1868 |
| 3 | 2129 | 2053 | 2029 |
| 4 | 2259 | 2117 | 2063 |
| 5 | 2510 | 2356 | 2298 |
| 6 | 2371 | 2304 | 2261 |

Analysis

We first looked at the pattern of accomplishments of API students by grade and by subject compared to the overall District pattern. Figure 1 on the following page shows the results. We saw what everyone else has seen: the API students perform higher. The API pattern parallels the general District pattern for each subject. In math, the magnitude of difference increases slightly but regularly, with the District pattern sloping downward more appreciably than the API pattern.

We can examine these overall patterns at a finer level in terms of both skill areas and instructional practices. Each subject matter in the SES is divided into skill areas corresponding to the grade-by-grade structure of instruction. For example, a skill area like whole number addition and subtraction is assessed at all six grade levels, while skill areas like decimals are assessed only at Grades 5 and 6 and readiness in reading is assessed only at Grade 1. To get a full picture of the



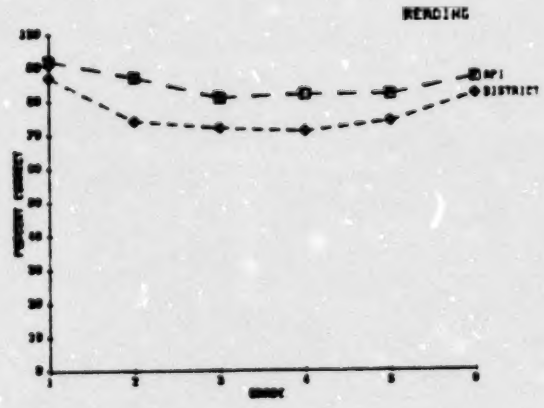




Fig. 1. Overall API Accomplishment Patterns



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patterns, we examined all skill areas for all grades in each of the three subjects--a total of 24 skill areas for mathematics, composition and reading.

Relative to instructional practices teachers were asked "For about what portion of this school year did this student use grade level instructional materials?" We divided the responses into less than 1/2 year and greater than or equal to 1/2 year:

LT 1/2: less than one-half year using grade-level instructional materials

GE 1/2: one-half to a whole year using grade-level instructional materials

We then looked at the accomplishment patterns of API students by skill area and by instructional practice. The resulting graphs shown in Figure 2 tell a consistent story. The patterns clearly differ by skill area; skills that are difficult for one group are difficult for both groups; skills that are easy for one group are easy for both groups. The groups consistently differ; students who receive instruction (GE 1/2) on a skill learn it while students who don't receive as much opportunity to learn the skill (LT 1/2) don't do as well on it.

Other SWRL studies show that the performance patterns exhibited in Figures 1 and 2 are closely related to the substance and structure of typical classroom instruction, particularly as it is reflected in the instructional materials that teachers and students use. That is, the "thickness" or "thinness" of lesson space devoted to particular skill areas, its placement in curriculum sequence, and the relative complexity of the skill area concepts in concert explain the performance graphs.

Fig. 2. Skill Area Patterns by Instructional Opportunity

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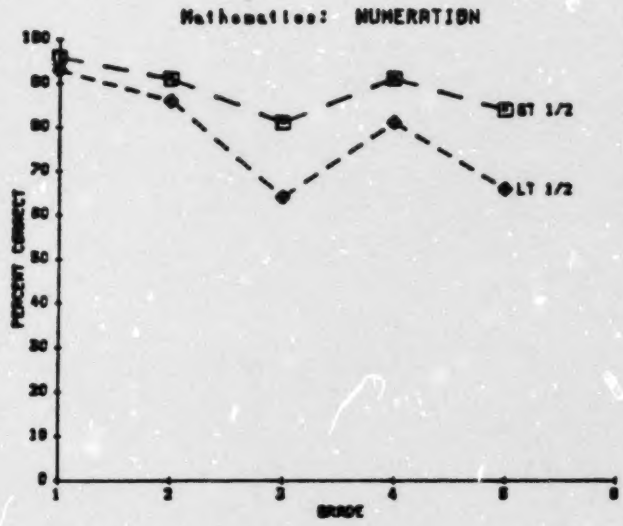


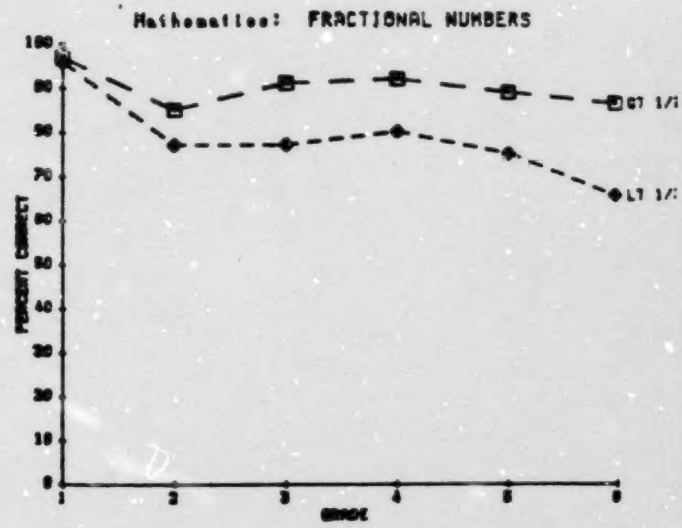


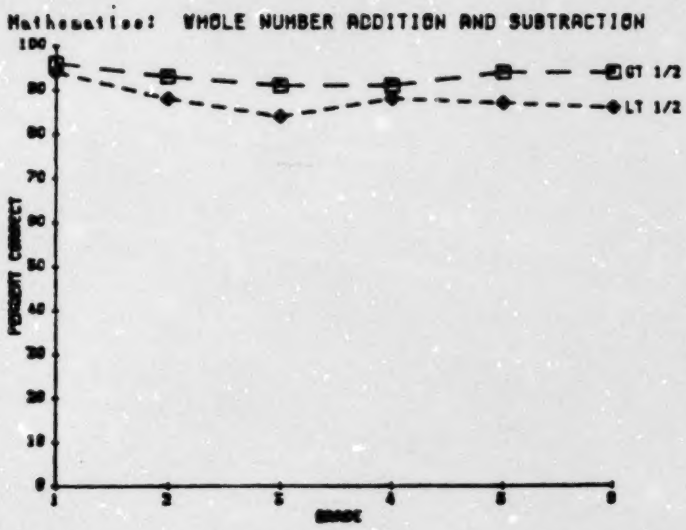


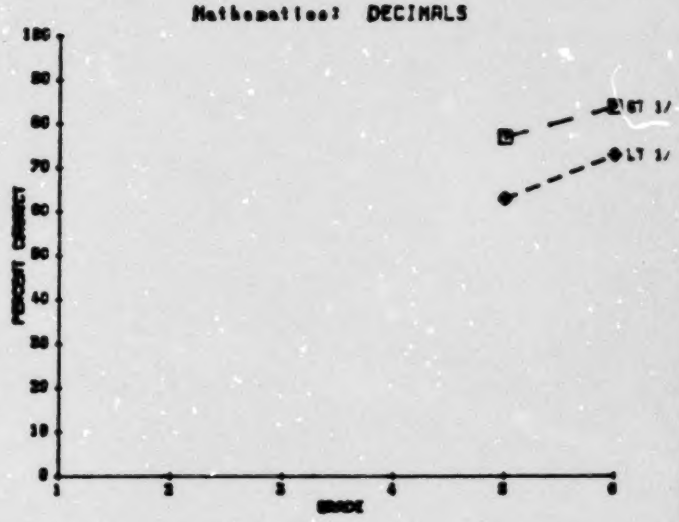


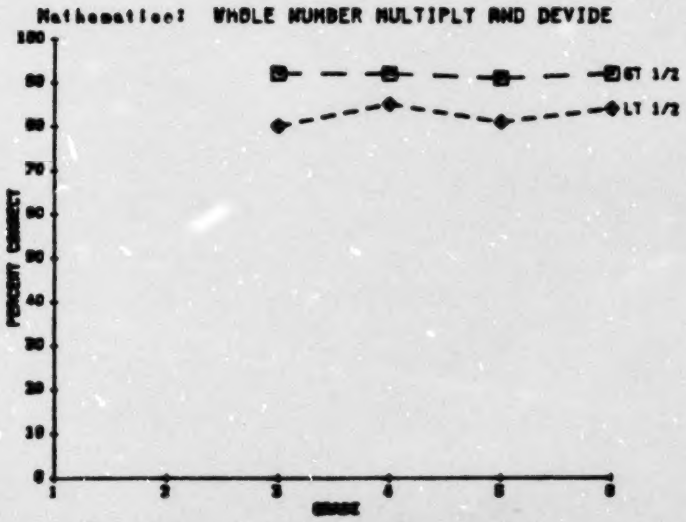


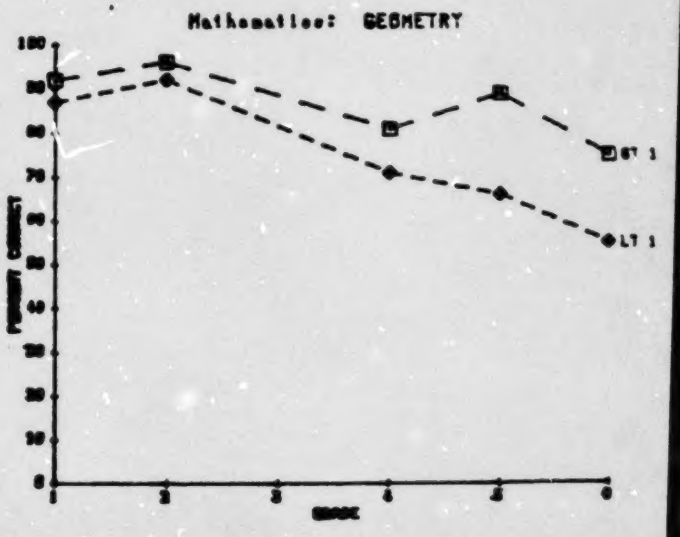

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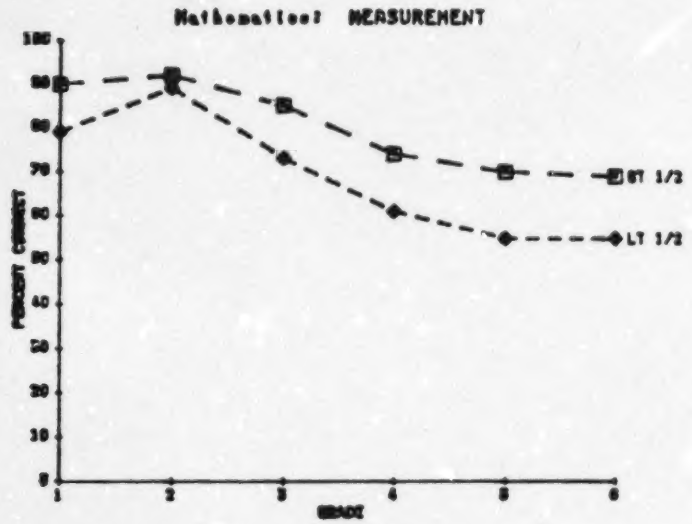


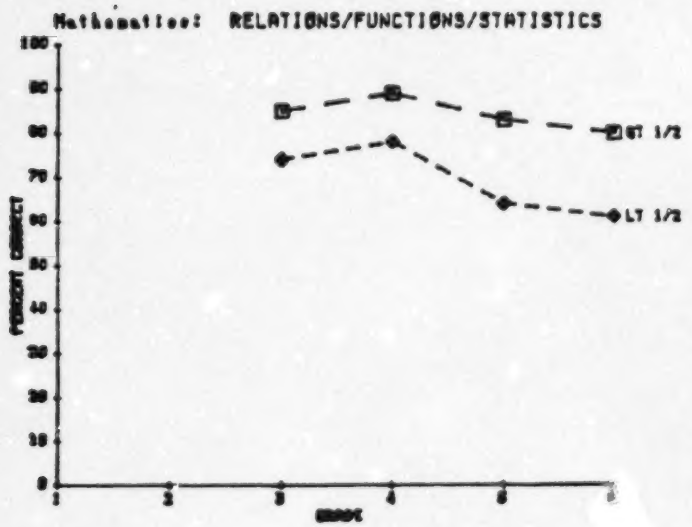


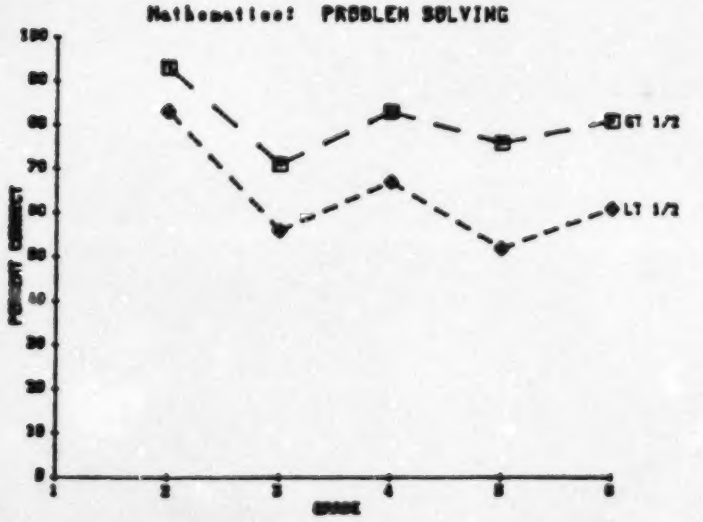


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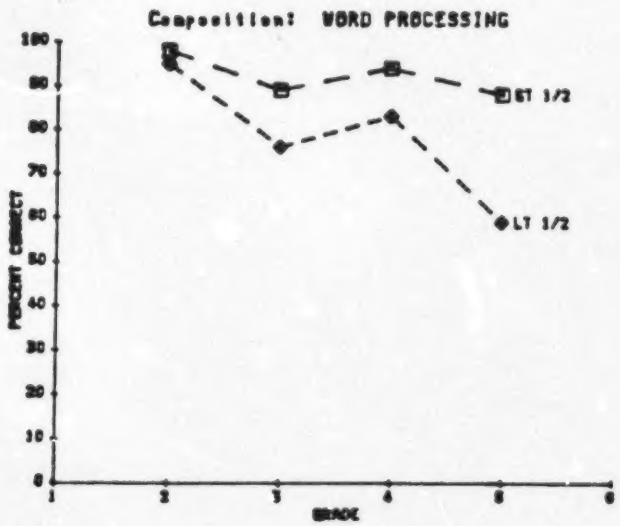


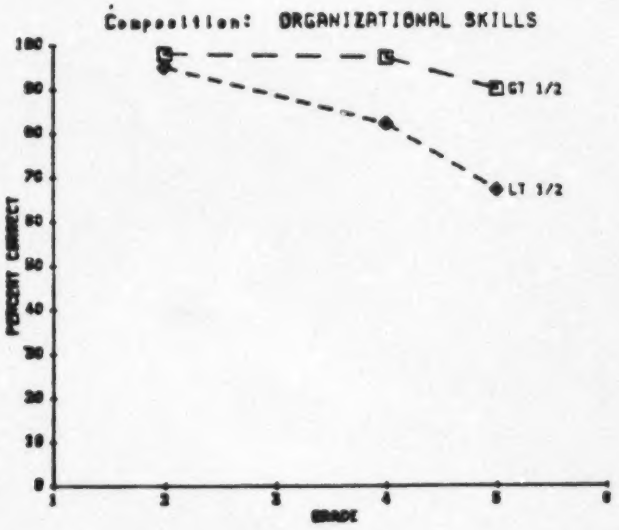


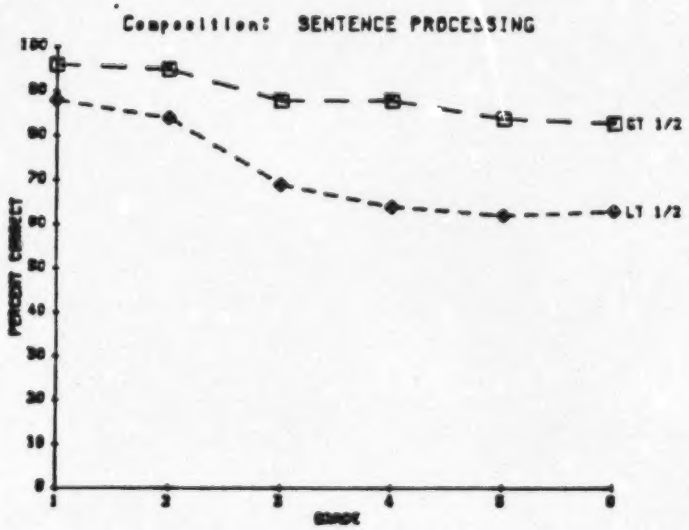


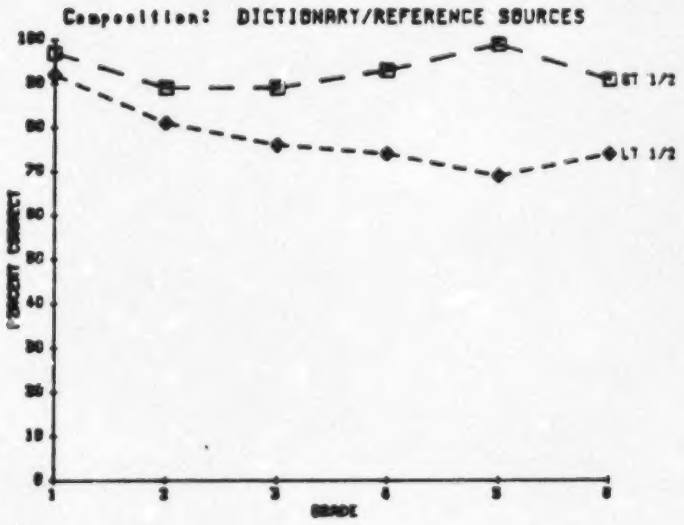


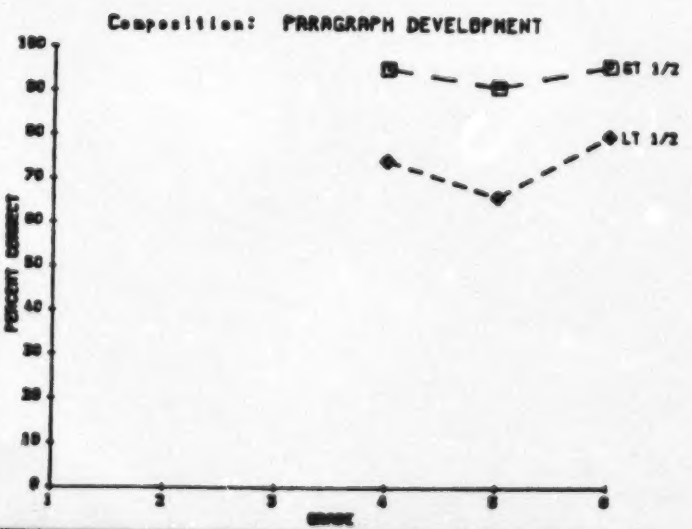


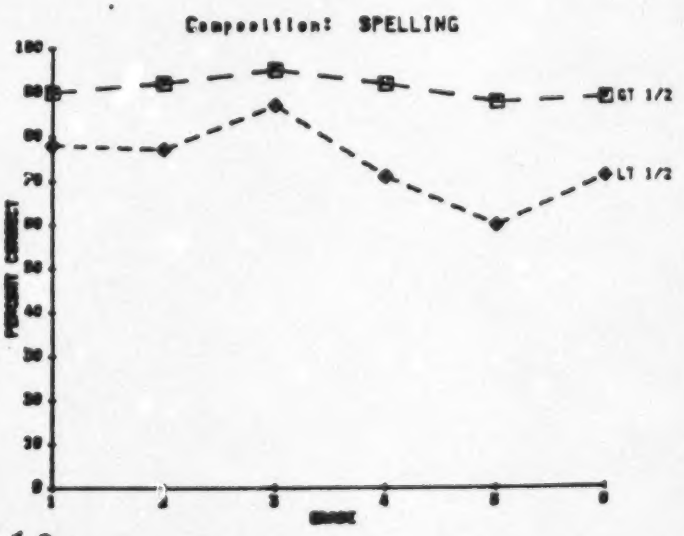

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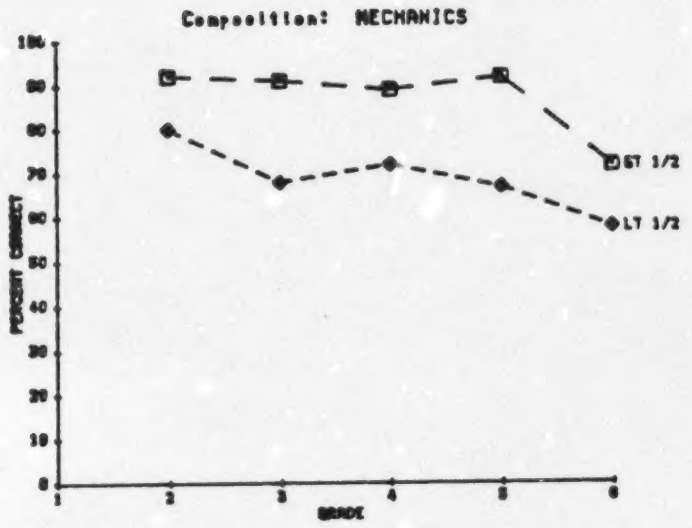




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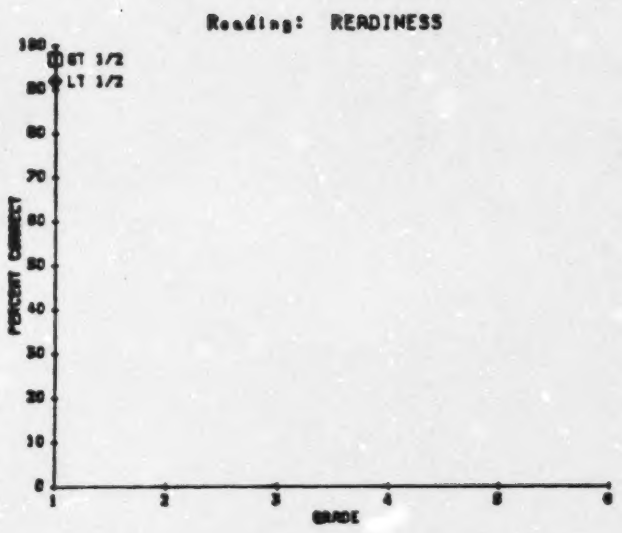


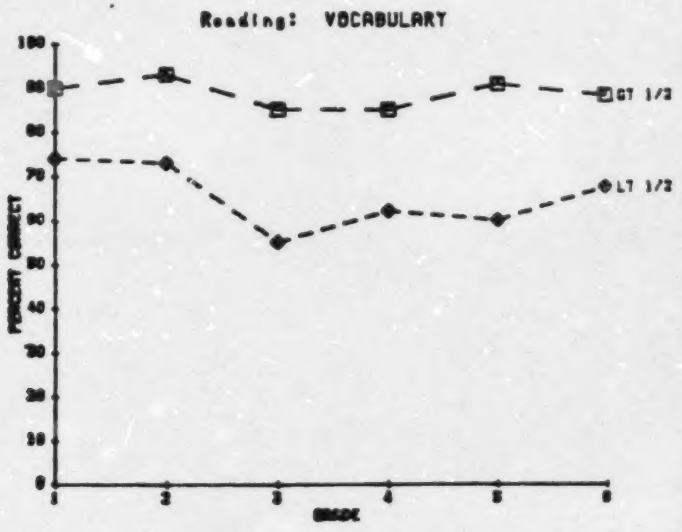


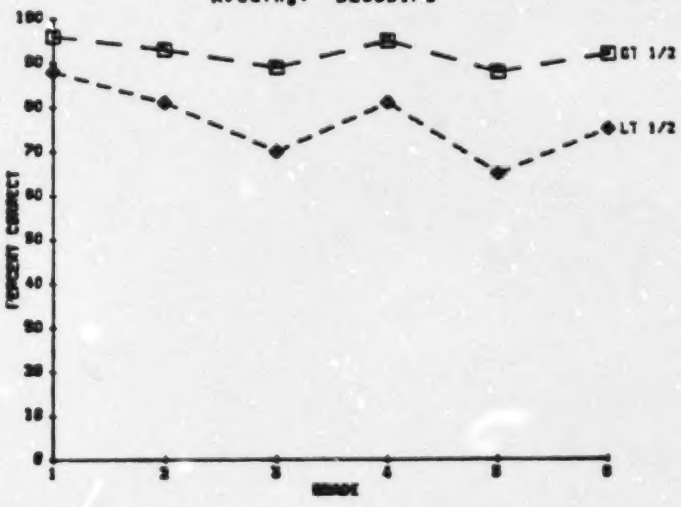


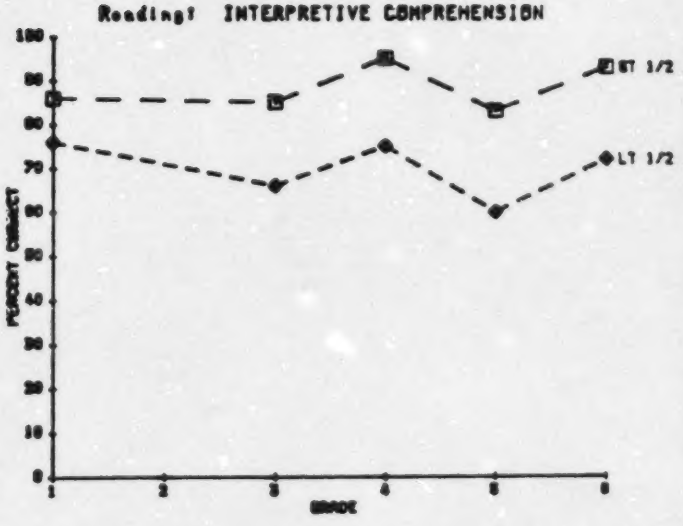


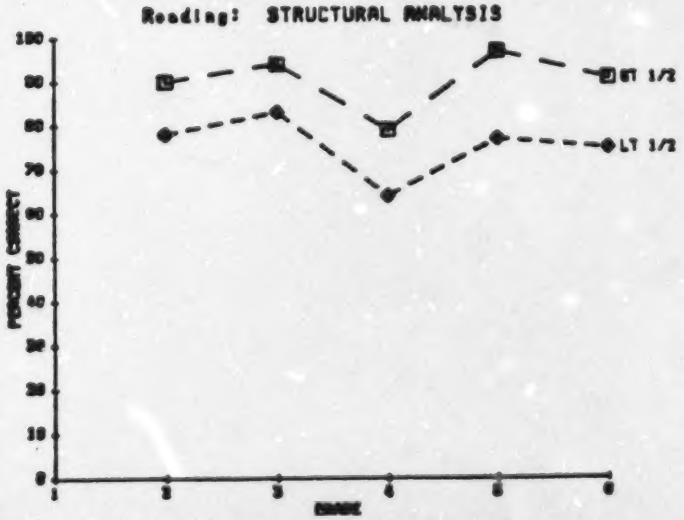


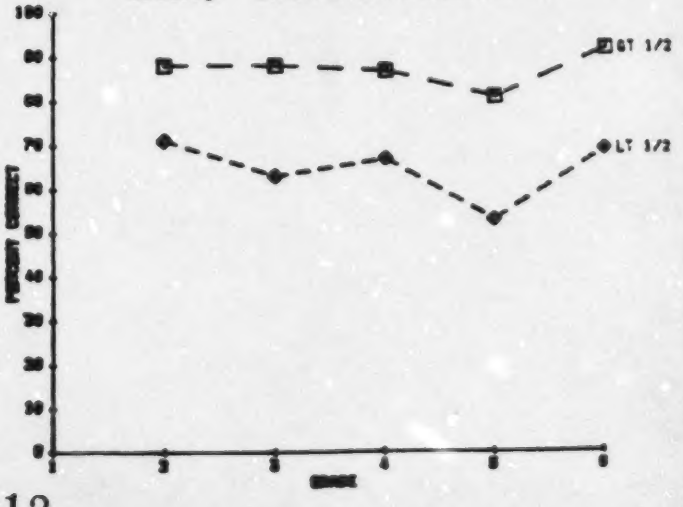

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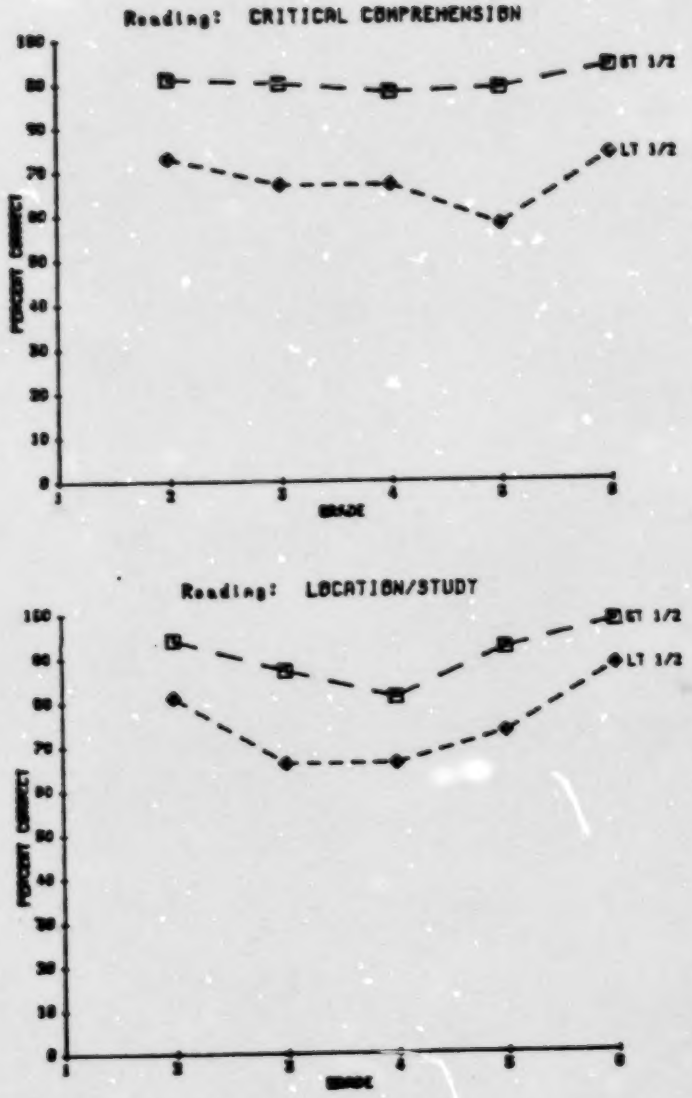




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Discussion

The news educationally is not in ethnic differences. It didn't take any study to know that API students belong to a different ethnic group. Although the patterns of instructional accomplishments of API students could have been different, they aren't.

Neither is the news in language differences. It didn't take any study to know that there are language differences among API students. However, look at the grade 5 patterns that include limited-English students. Adding these students does not affect the findings.

Further analysis of the accomplishment patterns at any finer level would not alter the patterns seen in Figures 1 and 2. We could look at items. We could look at conditions such as absenteeism. We could look more intensively at English language proficiency. Although that would about exhaust the variables in the present data base, we could collect additional data to tap other variables. However, it is unlikely further analysis would substantially deviate from the accomplishment patterns yielded by the current level of analysis.

This does not mean that the pattern of accomplishment for API students is now optimal, only that the accomplishments are malleable. The findings lead to two actionable conclusions.

1. Classes, schools, and districts differ in terms of the learning opportunities they are providing API students. The intention is always honorable--to help individual students. However, "how much of what grade" text a student is taught and how much of the school year students (and teachers) are present are important

determiners of accomplishment patterns. This conclusion points to an information system at the school, supervisory, and district levels that make this aspect of instruction visible and accessible. Such an information system is feasible with the computer equipment currently in school districts.

2. The accomplishments of API students conform to the structure and substance of instruction. All students, API students included, learn what they are taught. Therefore, the proficiencies/skills/outcomes/tasks which constitutes "what" they are taught warrants careful attention. Such "task-on-time" analysis can lead to both an enlarged scope of accomplishments and an economical reduction of instructional risks. This conclusion points in the direction of instructional development--analysis of the determining antecedents of accomplishments rather than the accomplishments per se.

The instructional accomplishments of API students, like those of other students, can be improved. The need for such improvements is as clear and justifiable as that for other students. The nature of the work to meet the need appears sufficiently illuminated by the present findings to proceed with confidence.